DOCUMENT RESUME

ED 375 539 EC 303 375

AUTHOR	Hellerman, Susan B., Ed.
TITLE	Getting the Best Precollege Education.
INSTITUTION	Johns Hopkins Univ., Baltimore, MD. Center for Talented Youth.
REPORT NO	ISSN-1071-605X
PUB DATE	94
NOTE	17p.; For all volume one issues of this newsletter, see EC 303 371.
AVAILABLE FROM	John Hopkins University Press, 2715 North Charles St., Baltimore, MD 21218-4319 ($30 annually, $5 back issues).
PUB TYPE	Collected Works - Serials (022)
JOURNAL CIT	Imagine...Opportunities and Resources for Academically Talented Youth; v1 n4 Mar-Apr 1994
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Ability Grouping; *Academically Gifted; Achievement Need; *Advanced Placement Programs; Advanced Students; College Bound Students; Cooperative Learning; *Educational Opportunities; *High Schools; School Choice; Self Motivation; *Student Development
IDENTIFIERS	International Baccalaureate; Yale University CT

ABSTRACT

This theme issue of a newsletter for academically talented youth focuses on getting the best precollege education. It encourages students to take responsibility for their own learning by becoming aware of all the options their school offers; making use of them; supplementing and enriching the basic school curriculum; and participating in extracurricular activities. It offers advice on choosing a high school for those students who have that option, and recommends consideration of early entrance to college. A student describes her experience participating in the International Baccalaureate program. The advantages and disadvantages of participating in the Advanced Placement program are explored. An article then reviews the debate over ability grouping and cooperative learning, followed by comments by parents and students on this issue. Another article offers suggestions to help students keep their high standards under control, recognizing that high standards can be an invaluable source of motivation and inspiration but can also form a relentless inner critic that becomes a negative influence. The regular feature, "College Review Series," offers a review of Yale University (Connecticut) based on experiences of 11 students enrolled there. A book review and puzzle conclude the issue. (JDD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

VOLUME I • NUMBER 4

ImaGiNe...

Opportunities and Resources for Academically Talented Youth

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

ED 375 539

March/April 1994

Mailbag **2**

Getting the Best Precollege Education **3**

International Baccalaureate **5**

To AP or Not AP? **6**

Ability Grouping and Cooperative Learning **8**

Coach's Corner **11**

Keeping your High Standards Under Control **12**

Students Review Yale University **14**

Creative Minds Imagine... **16**

"PERMISSION TO REPRODUCE THIS MATERIAL IN **OTHER THAN PAPER COPY** HAS BEEN GRANTED BY

Arlene W. Sullivan

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)"

Spotlight On

GETTING THE BEST PRECOLLEGE EDUCATION

As an academically talented student, you may find that a standard curriculum does not challenge you. If you frequently have to repeat—in one or more subjects—material that you've already mastered, the slow pace may leave you feeling bored and frustrated. Over time, your motivation and study skills may suffer, and you may end up ill-prepared for the academic challenge of a highly selective university.

Don't just sit back and wait for things to change. Take responsibility for your own learning.

First, be sure you're fully aware—and are making good use—of all the options your own school does offer. Then, recognize that no one school or program can, or should be expected to, meet all your needs. You yourself can do much to supplement, accelerate, and enrich the basic school curriculum.

Recognizing that education occurs both within and outside school walls, you'll be able to take full advantage of the opportunities for learning that exist anywhere and everywhere. ■

BEST COPY AVAILABLE

EC 303375

MAILBAG

Q *In elementary school I qualified for the gifted program, and in seventh grade, I earned high scores in CTY's Talent Search. I always found school very easy until this year. We moved to a new town last summer, and I started high school in September. My parents are upset that my grades are mostly Bs and Cs—I'm not too happy about it, either. I really am trying to do my best; but the courses are tough, and there are a lot of students in my classes who are as bright as I am. I also think my teachers don't like me. I would like to transfer to a private school, but my parents won't agree. What can I say to my parents to convince them that I should change schools?*

A You are dealing with several issues simultaneously: moving to a new community, starting high school, and encountering greater academic challenge than you've experienced in the past. While you might do better in a different school, there is no guarantee that these issues wouldn't follow you there. Try to improve the situation at your current school first; private school will still be an option to investigate later.

Although it's too late to make course changes this year, consider whether or not you were placed in appropriate courses based on your record from junior high. If gaps in your background are contributing to your academic difficulties, perhaps a tutor could help you learn the missing subject matter.

Even though you think you're working hard, consider whether at least part of your problem derives from relatively poor study habits. Students who have always done well in school without ever having to exert themselves can find it difficult to adjust when they are suddenly confronted with more challenging material. Discuss your concerns with a guidance counselor and with your teachers. Try to evaluate what steps you can take to study more effectively, beginning with these tips:

- Keep a well-organized notebook.
- Take notes in class and on your reading assignments; review them often.
- Do extra reading, if necessary, to help you fully understand a subject.
- Start assignments well ahead of time, so that you're not rushed at the last minute.
- Organize study groups to share notes and discuss course material before tests.
- Ask your teachers for help, and/or hire a tutor.
- Participate in class discussions; you will learn more by being actively involved, and your teachers will get to know you better.

Consider also whether feeling strange in a new school is affecting your self-esteem and your ability to achieve. Join some school activities. Although such activities seem to reduce time for studying, they also force you to organize your time more effectively. And your increased involvement will help you make friends and feel more comfortable in your new school.

Developing good study habits is crucial at this point in your academic career *and* essential for your later success in college, where you will find even more difficult subject matter and even abler peers. You still may not earn all *A*s in very competitive environments; that may be an unrealistic expectation. But you will know you did your best, and you should accept that. (Be sure to read the article on "Keeping Your High Standards Under Control" in this issue on pages 12-13.) ■

Students and Parents:

Academically talented students may have educational, social, and emotional concerns that are different from those of their peers. If you have questions that you'd like to see addressed in this column or in a longer article, please write to Imagine, SET at CTY, The Johns Hopkins University, Baltimore, MD 21218.

If you haven't yet subscribed to *Imagine* but would like to receive your own copy, you'll want to take advantage of our introductory offer while it lasts. If you subscribe now, you will receive five issues at the discounted price of $25.00 per year.

To subscribe, call The Johns Hopkins University Press at (410) 516-6945, or toll-free at (800) 548-1784, or by FAX (410) 516-6968.

Imagine...
Opportunities and Resources for Academically Talented Youth

Volume 1 • Number 4
March/April 1994

Copyright © 1994 by the Johns Hopkins University Press

All rights reserved. No portion of this journal may be reproduced by any process or technique without the formal consent of The Johns Hopkins University Press.

Published five times a year—September, November, January, March, and May.

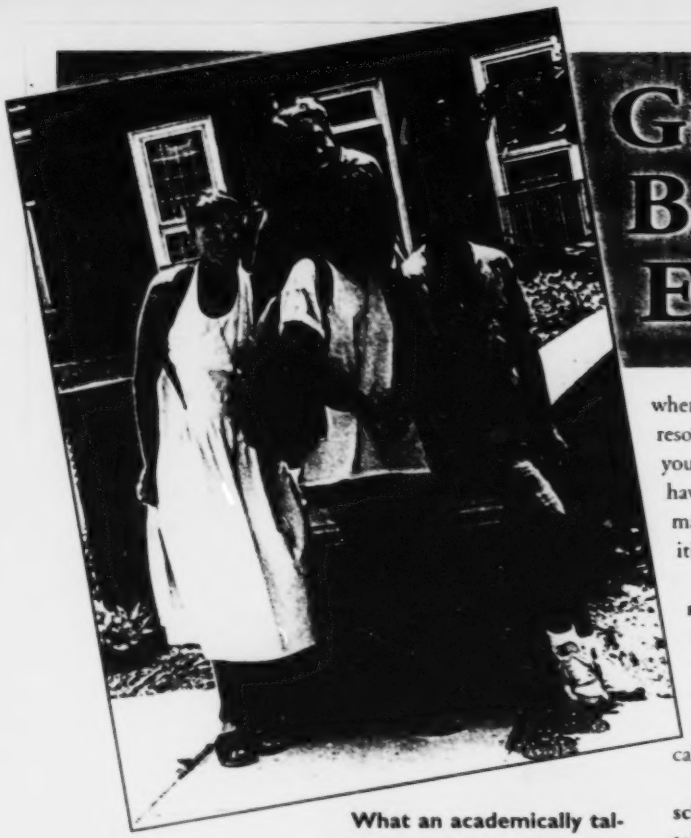
Imagine is published by the Johns Hopkins University Press for the Study of Exceptional Talent (SET) at the Johns Hopkins Center for Talented Youth (CTY). This publication is an outgrowth of newsletters and programs that, for more than twenty years, have served highly talented students identified by the Study of Mathematically Precocious Youth (SMPY) and by SET.

SET Director • Linda E. Brody, Ed.D.
Research Associate • Carol C. Blackburn, Ph.D.
Staff Writer/Editor • Susan B. Hellerman
Staff Writer • Lesley Mackay
Contributing Writer • Amanda J. Claybaugh
Administrative Assistant • Patricia A. Wade
Designer, JHU Press • Lesli M. Lai

Annual subscription: $30.00

Address subscription inquiries to:
Journals Publishing Division
The Johns Hopkins University Press
2715 North Charles Street
Baltimore, Maryland 21218-4319
Phone: (410) 516-6945 • FAX: (410) 516-6968
Toll-free: 1-800-548-1784

Address editorial correspondence to:
Susan B. Hellerman
SET at CTY
The Johns Hopkins University
Baltimore, Maryland 21218
Phone: (410) 516-0309 • FAX: (410) 516-0804



Getting the Best Precollege Education

What an academically talented student needs most from a high school is curricular flexibility coupled with a willingness to accommodate individual needs. Work with your school to design the best possible program for you, and supplement that program with learning experiences outside school.

If You Can Choose Your High School...

Those of you who are in the fortunate position of being able to choose a high school from among several public and/or private options may benefit from these suggestions:

High schools with a larger proportion of academically talented students are likely to offer more courses and other opportunities geared to these students. You might inquire about the number of National Merit Semifinalists in a school. (Although a concentration of them may say more about the student population than about the curriculum, the fact that so many students are in need of advanced courses has probably influenced that school's course offerings.)

If possible, visit the schools you are considering during a regular school day. Talk with students and with the principal/guidance counselor. Look at a course list; ask about curricular flexibility. Find out what extracurricular activities are available.

Remember that your local public school offers certain advantages—you pay no tuition and live at home in your own community, where many other learning resources may be available to you. Other types of schools have their own strengths and may or may not require tuition payments.

Regional or local magnet schools. Some school systems have developed magnet schools as a vehicle for offering greater challenge to academically talented students.

State residential high schools for academically talented students. Specialized boarding schools in math and science and/or in the arts have been established in some states, including North Carolina, Illinois, Alabama, and Oklahoma.

Independent schools. A vast array of private day and boarding schools exists, with variations in admissions standards, educational philosophies, and curricular flexibility.

Whether or Not You Can Choose Your High School...

It's true that some high schools present more courses and opportunities than others. However, even if you can't choose where to enroll, bear in mind that a school's willingness to be flexible about course requirements and progression may be the most important factor in meeting your curricular requirements.

- **Take full advantage of all that your school offers.**

Prepare yourself for college, and for life, by getting a firm background in all the liberal arts while you're still in high school.

In today's interdisciplinary world, a broad-based education is critical to success. A physicist must be able to write clearly. A social scientist needs to know statistics. And no matter which profession you choose, your ability to work with people from a variety of cultural backgrounds will be enhanced by a knowledge of history, geography, and languages.

So be sure that your class schedule encompasses not just those subjects that interest you most, but also a full range of courses in math, science, and the humanities, including foreign languages.

Take the most advanced courses available—especially in your areas of strength—including *honors, Advanced Placement* (AP), and/or *International Baccalaureate* (IB) options. These offer greater depth and challenge and are worth the extra effort; some may even earn you college credit. Carefully consider your qualifications for specific advanced courses, but don't avoid them simply because you might earn an occasional *B*. (See the articles on AP and IB programs in this issue.)

- **Supplement school offerings with coursework outside school.**

If the courses your high school offers are limited, you may be able to find what you want somewhere else. However, before you pursue one of these options, find out if your school grants credit for coursework taken elsewhere, or if they would allow you to test out of lower-level courses. If not, you may be better off choosing subjects for enrichment rather than those that would result in your having to repeat the same coursework later.

Correspondence courses may demand more time than you usually spend on homework for one subject, so you'll want to evaluate your academic and extracurricular schedule as you consider this option. Also, some correspondence courses require that you have a tutor or mentor to help you understand new concepts and/or to grade your work according to the guidelines of the sponsoring institution.*

**Imagine* will discuss correspondence courses in the next issue. For an overview of more than ten thousand possibilities, consult Peterson's *Independent Study Catalog*, available in libraries, bookstores, or from Peterson's, P.O. Box 2123, Princeton, NJ 08543-2123.

4 BEST COPY AVAILABLE

Part-time college study may be worthwhile if you have ready access to a college campus. If you have completed the high school curriculum in one or more areas, but are appropriately placed at your grade level in others, you may be given release time to spend part of your day at a local college. Or you could select evening classes.

Consider how you would feel about being in classes with older students. If you hope to transfer these credits later to your full-time college, be aware that not all schools accept such a transfer, although most will grant you placement in a higher-level course. Or you may choose to attend one that will accept credits.

Tuition reimbursement—through which some states or school districts pay for part-time college courses taken by high school students—is relatively new and not available everywhere. Check with your guidance counselor or with your State Director of Programs for the Gifted (if there is one).

Academic summer programs through regional talent searches or colleges and universities provide coursework acceleration and enrichment along with the stimulation of being with other academically talented students. (See *Imagine's* January/February '94 issue.)

Study Abroad programs offer both summer and academic year options. Under the sponsorship of a stateside university or other accredited organization, you get to travel to an area of the world you may never have seen before, immerse yourself in another culture, improve your foreign language skills, and take courses not available in your own high school.

■ **Participate in extracurricular activities.**

Use some of your time outside the classroom to gain content knowledge and develop skills not included in the school curriculum.

Academic competitions are available to students nationwide, and their number and variety are expanding. (See *Imagine's* September/October '93 issue.) Whether individual or team activities, academic competitions give you the chance to become more proficient in a field in which you already excel and to enjoy the camaraderie of others who share your interests. In addition, winners receive well-deserved recognition and sometimes even reap financial awards for their prowess.

Anyone who seeks to be well-educated can also benefit from involvement in extracurricular activities that fall outside the strictly academic realm. Set aside some time to pursue the *arts, athletics, leadership roles in organizations,* and *public service.*

■ **Seek mentorships and internships.**

In such relationships, students work independently with guidance from professionals who are knowledgeable in a particular field. A *mentor* might work with you on a correspondence curriculum, as mentioned above, or in a special area that interests you but is not readily accessible in other ways. In an *internship*, you might work in an office or laboratory on a specific project and may or may not be supervised by someone who acts as your mentor.

Both options would not only expand your content knowledge, but also help you experience the work world and get to know professionals who may become your role models.

■ **Use leisure time well.**

Along with structured activities, you probably already enjoy the intellectual stimulation of many worthwhile free-time pursuits. *Reading, writing, studying independently, visiting museums, attending cultural events, traveling with family,* and *socializing with friends* all make important contributions to any person's life.

When you create your own "Optimal Match" by making good use of the myriad resources available in your community, you'll guarantee yourself an excellent precollege education.

If You're Out of Options... Consider Early Entrance to College

If you've made good use of all the resources discussed above but still find yourself running out of appropriate courses, you may want to explore the possibility of entering college early.

Many colleges are willing to grant acceptance to young high school students if they can demonstrate that they are intellectually and emotionally ready to attend college full-time. A few colleges offer special provisions for such students, but most treat early entrants just as they would any other freshman.

Academically talented students who choose to enter college a year or two early rarely encounter unusual adjustment problems—as long as they have given their choice careful thought and have the academic background necessary to succeed in college. More radical accelerants—students who enter college three, four, or even five years early—need to be more cautious about the wisdom of such a decision, especially if they choose a college that doesn't offer a supportive program for early entrants. ■

Imagine will feature a more detailed article on early entrance to college in a future issue. Meanwhile, students and parents seeking information are encouraged to read "Young College Students: Assessing Factors that Contribute to Success," by L.E. Brody and J.C. Stanley, in *The Academic Acceleration of Gifted Children,* (edited by W.T. Southern and E.D. Jones, Teachers College Press, New York, 1991).

Smart Kids

For further insight and additional strategies to use in acquiring your optimal precollege education, read the case studies of talented students presented in *Smart Kids: How Academic Talents Are Developed & Nurtured in America,* by W.G. Durden and A.E. Tangherlini.

***Smart Kids* examines the need to provide extraordinary young people with appropriate educations. "Educations," not "education," is the operative word: one of the book's main points is that talented students need to learn at a level and a pace that precisely suit them in each field of their endeavors.**

The need for flexible academic pacing is first explored in the book's case studies—personal accounts of nine students' struggles to transcend limits initially imposed by their schools and to learn more, both inside and outside the classroom. Each student is faced with frustrations in his or her family, peer relationships, and scholastic experiences; and each student copes, and often triumphs, in different ways.

***Smart Kids* goes on to investigate schools, academic programs, and the work of particular administrators and teachers already committed to seeking appropriate educations for particularly talented students. Extraordinary teachers, flexibly-paced advanced academic programs, opportunities for acceleration, and legally mandated Individual Education Programs all contribute to the patchwork of possibilities sometimes available to help students achieve the "Optimal Match."**

Although *Smart Kids* focuses on academically talented students, its message—that optimal learning is only achievable when schools embrace the unique needs of individual young people—applies to all students.

***Smart Kids* (published by Hogrefe & Huber, 300+ pp., $27.50), may be ordered from the Center for Talented Youth: CTY Publications and Resources, The Johns Hopkins University, Baltimore, MD 21218. (Add $3.50 for shipping and handling.) ■**

International Baccalaureate

by Progna Choudhury

Having spoken very highly of the International Baccalaureate (IB) program in the past, I looked forward to writing an alumna's account for *Imagine* readers considering this option. Yet, finding fond memories to share was not easy; I remembered that the two years I spent in IB were perhaps the most difficult of my life. I often felt overwhelmed academically and sometimes felt lacking in social interaction. Despite all this, I would never change my decision to enter the IB program because I learned and grew so much, realized my potential, and developed the love of learning that motivates me today.

The negative aspects of my time in IB were peculiar to me, I think, rather than inherent in IB itself. In the middle of my junior year, my family moved from the heart of Baltimore City to a suburb of Washington, D.C., and I was forced to change schools. Suddenly, this city girl was thrown into the *'burbs*, into a magnet school where cliques had already formed, and into an intimidating academic program.

I worried that the other students had a head start: they had gone through the pre-IB curriculum for two years, so they *knew* what IB expected of them. For the first time in my life, I had to spend long hours on schoolwork, usually staying up until 11 pm, and was struggling to get the *A*s that used to come so easily. At first, I was determined to drop out of IB and transfer to my neighborhood school, but I soon realized I had to meet this challenge or be disappointed in myself. Luckily, I met three wonderful young women who had also just transferred and were in the same boat, and a support system grew.

Although other IB students didn't feel as overwhelmed as I first did, we all loved to complain about our lack of a social life due to inordinate amounts of work. Yes, I believe that the average IB student spent less time partying than did the average non-IB student, but we weren't inactive—many SGA officers, football stars, and lead members of the band and chorus were in IB. In the end, I think very few of us felt we had missed out on anything important during high school.

Overall, the IB curriculum probably made us the best-prepared-for-college students in the country. When I entered Johns Hopkins, I received a year's credit because of my scores on IB's final comprehensive exams. Compared with other college freshmen, IB alumni seemed to know how to study more efficiently, manage their time more effectively, and write more clearly. After all, we were well practiced at taking notes at warp speed, preparing voluminous research papers in almost every class (even math!), writing up lengthy labs, and taking exams that covered *everything*. We, who thought we had it rough in high school, actually felt less stressed by college.

At a deeper level, I am glad that I stuck with IB because I learned so much more. The IB curriculum itself was more advanced than many introductory college courses. We never read textbooks only—we read so many different books, participated in so many seminars, heard so many guest lectures that almost every topic was covered in depth.

We would sit in near awe as our history teacher cited names and dates and minute details from memory, describing the past as a story, bringing it to life. Our English teacher forced us to read and reread and discuss at length, so that we could look at any literary work from many angles in search of deeper meaning. I was amazed by how much our teachers knew and understood, by how committed they were to helping us grow intellectually.

My biggest qualm about IB was always its Euro-centrism: we read only Western writers ("world" literature meant Flaubert and Kafka) and studied only Western history (any mention of Asia or Africa was in the context of colonialism). To make up for this lack, I decided to write my History Internal Assessment (IA) on the division of India and Pakistan, a topic I knew nothing about. I learned how to use a university library and read myriad books and articles until I finally knew some history of my own cultural background. Every student presented his or her IA topic orally (we sometimes stayed after school for this), so—from our peers—we learned about everything from the Khmer Rouge to World War II artwork. Similarly, I chose to write my required Extended Essay comparing three Indian authors, which broadened my knowledge of literature. (The IA and Extended Essay were each required to be about twenty pages long.)

For our math project, some chose to work with fractals or chaos theory; but even then I was very interested in psychology. So I did a statistical project studying attitudes: I planned, carried out, analyzed, and wrote up my first psychological study before entering my senior year of high school.

Knowledge and experience are what one expects from a high school education, and IB delivered beyond my expectations. What I did not expect, and hadn't really gotten from my previous school, was the ability to think critically about my world. The Theory of Knowledge (TOK) requirement forced us to reevaluate the logic of our reasoning—to think about *how* we know what we know, *why* we believe what we do; to rethink what we had previously accepted as true without question; to consider what art is, what morality is. . . .

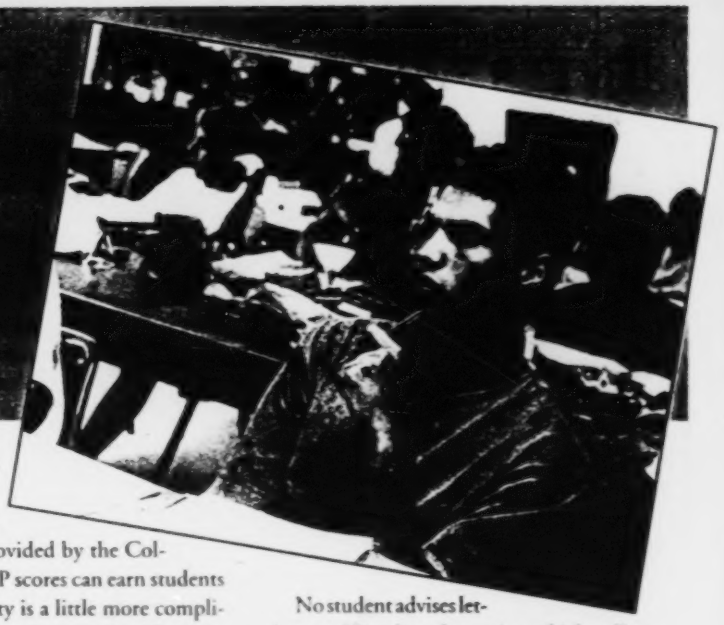
While TOK introduced us to thinking analytically, we were expected to practice this skill in every class. We were never spoon fed: IB's philosophy is that students should learn and discover on their own. Our teachers presented problems and asked questions, and we students discussed them until we came up with a solution. I now miss the willingness that IB students had to share their ideas and to learn from one another; even in college, I have not found as much questioning and in-depth analysis.

Of course, all is not perfect with IB. One or two of my friends felt burned out after the rigorous program and opted to take some time off before going on to college. Inevitably, everyone's experience with IB was different, but my experience was excellent—IB helped me open doors I hadn't known existed, instilled in me a love of learning and thinking, and placed me in an environment with brilliant instructors and interesting students without sheltering me from the outside world.

For all of us, the thrill of successfully completing IB—the sense of an ending and a beginning—electrified our graduation ceremony. For me, the IB diploma symbolized a difficult personal challenge well met. What a great feeling! ■

Now a senior majoring in psychology at The Johns Hopkins University, **Progna Choudhury** plans to pursue a Ph.D. in social psychology. She emigrated from Bangladesh at the age of six with her family and enjoys learning, teaching, and performing Indian classical dance and vocal music.

The Advanced Placement Program: *To AP or Not AP?*



What Does AP Mean?

After years of taking classes labelled G&T or TAG or GATE, you may think of AP as just another set of initials with which to adorn your transcript. But, although Advanced Placement classes resemble other kinds of gifted classes in their difficulty and selectivity, they do differ in one important respect: *AP classes can allow you to earn college credit as a high school student.*

The AP program, which is administered by the College Board and taught at local schools, currently includes sixteen courses in the sciences and humanities. The range of AP classes that your school may offer extends from calculus to the history of art, from English literature to computer science. All AP classes are taught at the college level, and you'll find that work is assigned and graded accordingly.

What Are AP Exams?

After spending a year doing college-level work, you may choose to be evaluated against college standards. Every May, the College Board administers the AP Exams, which consist of both multiple-choice and free-response questions. The multiple-choice sections can be scored by machine, but the free-response sections are read by teachers who are selected from across the country.

The College Board brings these teachers together every June and trains them in the standards of the AP. Two readers score each free-response answer; if the scores they assign differ significantly, a supervisor reads the answer again. This process ensures that the score you receive is fair and is consistent with all the other scores assigned for the exam.

What about College Credit?

AP Exam scores are important, because they determine whether the college you enter later will consider giving you credit for your work. AP scores range from *1 (no recommendation)* to *5 (extremely well qualified)*. Policies vary, but most colleges consider an AP score of at least a *3* equal to a satisfactory grade in a comparable college course.

That equivalence, however, means different things at different colleges. Pamphlets provided by the College Board stress that AP scores can earn students college credit; the reality is a little more complicated. While most colleges do recognize AP scores, their policies vary with respect to their use.

If you score a *5* on the American history exam, for example, you may find that one college will allow you to skip into an advanced history seminar. Another college may grant you three credits for that score, and those credits may fulfill some of your distribution requirements. And if you also scored well in calculus, chemistry, and English literature, you may find that a third college will allow you to graduate in three years. This variety of options is simply too broad to be summed up in the phrase "college credit for high school work."

To find out how AP credits work in practice, we surveyed students who had taken AP classes before going on to highly selective colleges. They told us what they had learned and how they had decided to use their exam scores. Their advice below is useful for students who want to get the best possible education in high school—and in college.

Planning Ahead

Because colleges have different policies about AP scores, it's essential to do some preliminary research. One student advises, "Be sure to look into each school well ahead of time, i.e., start thinking about it junior year."

When you are considering colleges, find out what scores they require on each exam and what kind of credit or placement they give. While the answers to these questions may influence your college choices, you probably shouldn't make them the deciding factor. One student warns:

Students shouldn't make a decision about a college based on its AP credit-granting system. A tougher AP system means a tougher school, and if you have to retake some basic classes or core requirements, maybe you'll actually be taking better advantage of what the school has to offer.

No student advises letting an AP policy determine which college you attend, but a few advise letting it determine which AP Exams you take. Each AP Exam costs $71, although fee reductions are available for students with financial need and some school districts foot the bill. One student felt that $71 was too much to pay for a test that didn't translate into any useful credit:

I wasted time and money taking the AP Exams, because I don't really want to graduate in three years [the only AP option available at her college]; I want to be an undergrad for four years.

On the other hand, the price of an AP Exam is still much lower than the price of a college course. In 1994, a single college course may cost as much as $2,500. Given the huge savings that are possible, it probably makes sense to hedge your bets by taking as many AP Exams as you can.

And even when an AP score won't translate into credit you can use, it can still help you in other ways—by impressing admissions officers or convincing professors to let you take more advanced courses.

Challenging Option

While a few of the students we surveyed questioned the value of taking AP *Exams*, not one of them questioned the value of taking AP *courses*. After discussing credit options, one student pointed out:

The main reason for taking an AP class should be that you are looking for a more interesting class and a more challenging environment in which to learn.

Another student emphasized that it was the other students, as much as the more rigorous curriculum, that made her AP classes so rewarding:

In 1994, AP Exams were given in the following subjects: Studio Art (Drawing Portfolio and General Portfolio); Biology; Calculus (AB and BC); Chemistry; Computer Science (A and AB); Economics (Macroeconomics and Microeconomics); English (Language & Composition and Literature & Composition); European History; French (Language and Literature); German Language; Government & Politics (Comparative and United States); History of Art; Latin (Vergil and Latin Literature); Music Theory; Physics (B and C); Psychology; Spanish (Language and Literature); and United States History.

I preferred the more challenging and therefore more intellectually stimulating and rewarding AP classes to the easier regular-track courses. I liked the atmosphere of the AP classes because, as in college, people were there because they wanted to be there, not because they had to take the course to graduate.

For students who have already exhausted their high school curricula, AP courses provide an alternative to entering college early. As one student explained:

I took the AP courses because I was ready to take them, and it just made sense. Otherwise, I would either have had to go to college early (which I didn't want to do) or be bored to tears in high school.

Indication of College Readiness

The benefits of AP coursework extend into college. Many students have discovered that, aside from the concrete advantage of earning college credit, less tangible effects exist as well. Some believe that the AP courses they took, and AP scores they received, influenced college admissions officers who read their applications:

Think about it: if you are applying to study at a college, and you show them that you have already taken a lot of college-level courses and have done well in them, the admissions people have reason to put faith in your ability to do well at college.

Doing well on an AP Exam is obviously impressive, but even attempting the most challenging courses available at your school is enough to draw the attention of most admissions officers. So you shouldn't let fear of a low score deter you from taking an AP Exam or an AP class.

Even students attending colleges that don't recognize AP scores often consider their AP background to be invaluable. One student at Caltech, where AP credit is not granted, found that he had still benefited from his AP courses:

The APs do provide some advance preparation for college course. Further, Caltech has its own placement tests for some of its courses. The AP Exams may make good preparation for these.

College Placement

Students who do attend schools that recognize AP scores often find that they are able to place out of introductory courses. One student found, at her college, that:

[AP credits] allow you to go straight into upper-level classes, and that is definitely a bonus, because many intro-level courses are large and tedious.

Most students are thankful to have the chance, in their first year of college, to take more interesting, advanced classes. But others warn against doing so without careful thought:

I would caution against blindly letting an AP score be your basis for enrolling in a higher course. Often the AP is NOT equivalent to a college course. You only need 60% of the points on an AP exam to get the highest score, and I assure you that 60% of the credit in a Harvard course will not earn you an A.

The wisest plan may be to place out of courses *selectively*. One Yale student decided to skip all of the courses she had placed out of, except one that had a reputation for being especially well-taught.

College Credit

Many colleges award actual credit for AP scores. This credit may be used in a variety of ways: to fulfill distribution requirements, to waive required courses, and sometimes to lessen the number of courses required for graduation. One student found that:

My AP credits allowed me to skip two core courses (which was great!) and thus allowed me two more electives which I was glad to get!

All the students who earned college credit for their AP scores appreciated the flexibility and range of choices that this policy allowed them.

Early Graduation

Some colleges allow students to use AP credits *only if* they have enough to place out of a full year's curriculum and plan to graduate in three years. For students who already know what they want to study, and for students who face long years in graduate and professional school, skipping a year of college can be a good idea. And the financial savings can be enormous.

None of the students we surveyed chose to graduate early, however, and many advised against it:

I would generally recommend staying in college for four years unless you find yourself totally unstimulated—in which case, you're probably at the wrong school or in the wrong major.

Instead of moving too quickly through college, these students decided to spend their fourth year taking even more challenging classes:

My AP credits essentially allowed me to do more college level work than I could otherwise have fit into four years.

Other students felt that they needed all four years of college to reach their full intellectual and emotional maturity.

If Your School Doesn't Offer AP Courses

About half of all high schools offer some AP classes. If yours doesn't, you may be able to take AP courses at another high school nearby. Or you could try finding teachers who'd be willing to teach the courses that interest you. The College Board will provide them with sample curricula and test information.

If your school can't accomodate your interest, consider working with a mentor to learn the material, then take the AP Exam on your own:

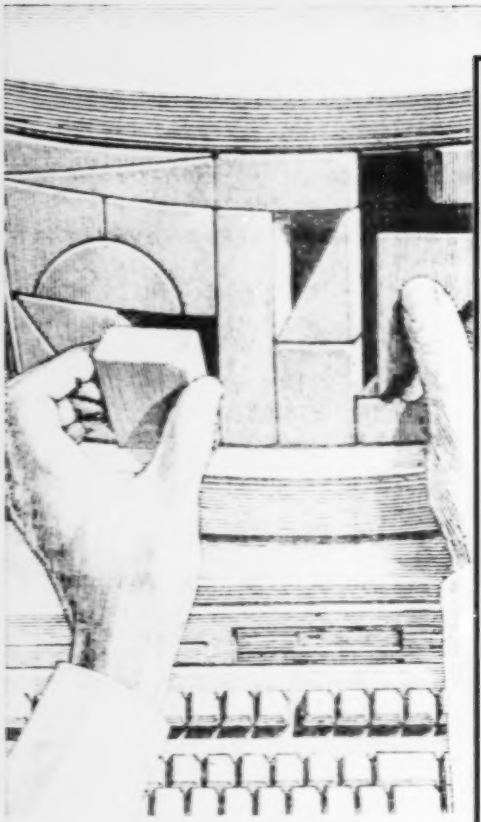
I took Calculus BC by mail from the Duke TIP program. The syllabus and supplementary material were both excellent. It's a good way for someone who has no other access to AP courses to learn the material.

If any of these options seem feasible, you should explore them further. A Princeton student may have been joking when he said that AP courses have helped him "impress people at cocktail parties," but the other benefits of the AP program are real. AP courses and AP scores can help you make your high school and college years as challenging and rewarding as they can be. ■

For free copies of the pamphlets *A guide to the Advanced Placement Program* and *AP Bulletin for Students and Parents*, write to Advanced Placement Program, P.O. Box 6670, Princeton, New Jersey, 08541-6670.

To find the college with the AP policy that best meets your needs—or the colleges that fall within a certain price range or offer a certain major—consider using the College Board's *College Explorer*. Updated annually, this software includes information about 2,900 different colleges and allows you to conduct searches of 600 options including AP policies, majors, location, admission rate, academic programs, student life features, and more. The software comes in both 3-1/2 and 5-1/4 formats and can be used on either the Apple II family or MS-DOS.

If your family or school is interested in buying this software package ($125), or if you want more information about the AP program, write to Advanced Placement Program, P.O. Box 6670, Princeton, New Jersey 08541-6670.



Ability Grouping and Cooperative Learning

A Review of the Debate

"Last year I was placed in an honors English class. I did intensive reading in Greek mythology and wrote papers analyzing my readings. This year the honors program was eliminated. Now, in my regular English class, I am studying language skills that I mastered years ago. I have to do drills and homework on material that I already understand. And the reading assignments don't challenge me."

Sound familiar? Academic options are being streamlined and reduced in many schools. Classes of particular benefit to academically talented students have been frequent targets of that streamlining. Why are educators cutting back on these learning alternatives?

The reduction of honors classes and other options typically enjoyed by talented students is in part a consequence of a debate among educators over two classroom techniques: *ability grouping* and *cooperative learning*. Classes in which students are grouped according to ability and achievement levels are being replaced by mixed classes emphasizing cooperative learning techniques.

What Is Ability Grouping?

Utilized in American schools for more than seventy years, ability grouping refers to many strategies designed to bring together students of similar ability or achievement. Ability grouping makes it easier for a teacher to tailor curricula to the readiness and skills of the students. The benefits of ability grouping result from the students' access to appropriately advanced curricula, not from the group divisions per se.

Ability grouping includes both short-term provisions, such as small groups of students working together for one class period on a limited set of mathematics problems, and more permanent arrangements, such as year-long classes for designated students in a particular subject.

Ability grouping is sometimes associated with *"tracking,"* which places students in semi-permanent interdisciplinary learning tracks according to their assessed abilities. But most proponents of ability grouping endorse a more flexible and localized process, characterized by frequent assessment in particular curricular areas and frequent opportunities for change.

What Is Cooperative Learning?

Cooperative learning typically brings students of different ability and achievement levels together and, much like team sports, requires them to meet particular goals as a group. Individual students do not compete against fellow members of their group, but instead see their achievement as interrelated to the performance of the group as a whole. According to proponents, cooperative learning should incorporate both individual accountability and shared group goals in order to be effective.

Cooperative learning can be employed when students have already been grouped by ability or achievement, effectively combining the two techniques. But in this analysis we focus on cooperative learning for students of mixed ability or achievement, since it is this type that is playing an increasingly prominent role in schools.

Why the Debate?

Ability grouping and cooperative learning can and—most educators believe—should function together as compatible aspects of academic programs. However, perhaps because the proponents of each technique have tended to express concerns about the other, these two learning strategies are often viewed as opposing sides in a debate.

Positive effects for both ability grouping and cooperative learning have been asserted by educators and supported by research.[1] However, the effectiveness of cooperative learning *specifically for talented students* has not been well studied. Despite this gap, many schools have taken a favorable attitude towards cooperative learning, substituting a broad cooperative environment for the ability grouping options formerly available.

This move towards cooperative learning and away from ability grouping has been partially inspired by current political attitudes and thinking. Perspectives on these two learning techniques reflect beliefs about our culture as a whole, our ideas of excellence, and our attitudes about how people should interrelate.

For example, ability grouping has been criticized by those who believe that schools should strive always to operate in inclusive ways in order to promote a less exclusive society. Such thinkers are disturbed by what they perceive to be the implicitly exclusive function of ability grouping, which separates students according to "differences."

It is important to remember, however, that there are many different types of ability grouping, some of which separate students only on a temporary basis and according to their particular academic strengths.

Finally, the move towards cooperative learning and away from ability grouping has been energized by economic cutbacks within school districts. Schools that have embraced cooperative learning have been able to eliminate academic options and justify the reductions as an integral part of a new learning technique. But even key proponents of cooperative learning—such as Professor Robert E. Slavin of The Johns Hopkins University—have spoken out against the broad dismantling of ability grouping programs.[2]

1. For example, see Carol J. Mills and William G. Durden (The Johns Hopkins University), "Cooperative Learning and Ability Grouping: An Issue of Choice," *Gifted Child Quarterly*, 36 (Winter 1992): 11-16.

2. See Slavin/Robinson debate in "Point-Counterpoint," *Journal for the Education of the Gifted*, 14 (Fall 1990): 3-36.

The Importance of Ability Grouping for Talented Students

When ability grouping is cut or diminished within a school's program, making it more difficult for teachers to facilitate different learning experiences for different students, all students—and particularly talented students—are deprived of a crucial educational approach. As one mother put it:

> *The current philosophy of our school district is not to group by ability. All children are given the same work. Bright children can do extra "enrichment" work if they want. This policy is very frustrating. I feel the everyday work should fit the child's ability. Why should one child have to do extra work to be challenged, when other children are done and ready to go out to play?*

The image of a young, intellectually talented child sitting and doing busy-work that does him no particular good illustrates the frustration of students who need the differentiated work made possible by ability grouping, but who cannot obtain it in their schools. Like the extraordinary tennis player and the committed musician, the student with intellectual gifts needs stimulation and challenge. Ability grouping can provide the highly able student with greater liberty to explore the subjects that she loves and to advance more efficiently as she explores.

Proponents of cooperative learning maintain that the *"peer tutoring"* or *"partner teaching"* in which talented students typically engage in the cooperative model is also intellectually beneficial to the talented student, since it has been demonstrated that teaching effectively instills material in the mind of the teacher. But it is unclear how many times the talented student can teach something that he or she already understands before such teaching becomes mere repetition.

Social Benefits of Cooperative Learning for Talented Students

Proponents of cooperative learning assert that talented students, as well as others, benefit from the social opportunities implicit in cooperative learning.

The frequently expressed belief that talented students need the social exchanges that are central to cooperative learning is sometimes based on the assumption that talented students are socially underdeveloped and need a prescribed type of social interaction in order to develop normal social skills. While all students benefit from regular, positive social interaction, there is no evidence to support theories of social maladjustment in talented youth; to the contrary, talented students are just as likely to be socially well-adjusted as other students are. Schools can contribute to the adjustment of talented students by validating and meeting their needs for flexibly paced academic programs and a variety of classroom techniques.

Furthermore, the social benefits accrue differently for talented students because cooperative learning does not offer the same social experience to all students. In the cooperative learning model, talented students usually assume a particular role and, simultaneously, a relatively high degree of responsibility for the success of the cooperative model: as peer tutors, they are responsible for teaching less advanced members of the group. Cooperative learning therefore demands highly sophisticated social skills from talented students, who are expected to facilitate the cooperative project without alienating their peers.

The Need for Balance

It is important to remember that current research generally supports the implementation of both ability grouping and cooperative learning. Providing students with a balanced set of learning options will allow them to emphasize the strategies that work best for them. Ability grouping should be maintained for its demonstrated value to all students—and particularly to students with unusual talents.

As Professor Ann Robinson of the University of Arkansas[3] has pointed out, time is limited in the classroom. The student who is explaining a geometric axiom for the third time is not moving ahead to learn a new axiom. Furthermore, such a student's teacher may hold him back from options such as acceleration for which he is eligible, so he can facilitate the cooperative learning process for other students. This outcome is particularly likely within the climate of a school that manifests a strong preference for cooperative learning at the expense of other techniques. ■

[3] Slavin/Robinson debate, *ibid.*

What Does the Research Say?

Effects of Ability Grouping for Talented Students

In a broad study synthesizing current research, Dr. Karen B. Rogers of the University of St. Thomas (St. Paul, Minnesota) found that most forms of ability grouping result in substantial academic gains for talented students. On the basis of her study, Dr. Rogers formulated the following guidelines for educators:

1. **Students with intellectual or academic talents should spend the majority of their school day with others of similar abilities and interests.**
2. **Clustering of talented students within a mixed classroom can be considered where programs for the talented do not exist.**
3. **Group instruction across grade levels according to students' level of mastery can supplement or replace clustering where programs for the talented do not exist.**
4. **Various forms of acceleration should be offered to talented students.**
5. **Various forms of enrichment that extend the school curriculum should be provided to talented students.**
6. **Mixed-ability cooperative learning should be sparingly incorporated into the education of talented students. Until there is evidence that cooperative learning provides academic outcomes similar or superior to those achieved through ability grouping, the grouping practices that are supported by research should be continued.** ■

Dr. Rogers' study, "The Relationship of Grouping Practices to the Education of the Gifted and Talented Learner," is available from the Dissemination Coordinator, National Research Center on the Gifted and Talented, The University of Connecticut, 362 Fairfield Road, U-7, Storrs, CT 06269-2007; ($2.00 for the executive summary or $12.00 for the full-length paper).

Further information on this topic will appear in *Ability Grouping and Cooperative Learning*, currently in press for release in April. Order from Publications and Resources, Center for Talented Youth, The Johns Hopkins University, Baltimore, MD 21218; ($13.00 plus $3.50 for shipping and handling.)

BEST COPY AVAILABLE

BEST COPY AVAILABLE

Parents and Students Speak Out on Ability Grouping

Imagine **solicited comments on ability grouping from the Talented & Gifted Education computer bulletin board.* Here's a sampling of parent and student responses:**

"The fact of the matter is that children are grouped in school. The argument is between methods of grouping.

If you don't group by ability, then how are the students grouped? Typically, they are grouped by age. If anyone argues against ability grouping, then I'd like them to explain how grouping by age is more beneficial than grouping by ability. Isn't school an academic undertaking?

My five-year-old can add, subtract, multiply, divide, and write in complete sentences. When I send him to school to learn, shouldn't I expect him to be grouped with others of his ability so he can learn? Or should he be grouped with other students who happen to be five years old? School is really one of the few places where 'peer' means 'age.'

From personal experience, we were forced to pull my son out of school and place him into a private school. In the public school, he was grouped with students his age; in the private school, he is grouped with his peers. After three months in the local public school, he didn't know the name of a single child in his class. After four weeks with his peers, he knew the names of all his fellow classmates.

Ability grouping has helped my son academically, socially, and emotionally. Age-grouping did cause harm in all these areas."

—Parent, Minnesota

"My daughter excelled and was doing extremely well in ability groupings until the reading teacher decided that it was too difficult to manage four reading groups in a class and that two would be adequate. My daughter was slowed down to such an extent that total boredom set in when she reached fifth grade."

—Parent, Washington, D.C.

"I agree with the line of thought that kids should be grouped by age—mental age, that is. I myself have almost fallen asleep in some classes, particularly writing. I'm not exactly sure where the system picked up age grouping . . . In my personal experience (I'm in the fifth grade now), I've found that ability grouping is the best choice. If the system wants to put more learning into school, go with ability grouping."

—Student, Missouri

"I am extremely bitter toward the public school system for abandoning ability grouping. It was only through ability grouping that my daughter was able to feel that she wasn't alone in the way she thought or felt; she was also stimulated to excel in an environment that didn't make her feel like a nerd."

—Parent, Indiana

"When I want socialization, I'll put my kids in the scouts. In school, I'm looking for education.

When I send my child to math class, I expect him to learn math. He can add, subtract, multiply, and divide already. Is he going to learn math if he's stuck in a classroom of five-year-olds (no age diversity) who are learning how to count? Doesn't he have the same rights as all the other children around, that is, to **learn math?**"

—Parent, Minnesota

"From experience, I know that my son socializes better when he is with people of his own intellectual level, no matter what age they are. Most, if not all, of his friends are also in the "highly gifted" category; but when they get together, they behave (or misbehave) as other children do. They are not sitting around discussing nuclear physics, rocket science, or higher math—but they are able to "play" and be themselves when among their intellectual equals.

This does not happen when they are with people who are their peers in chronological age alone. They are different; their conversations are often more adult than those conducted with kids who are only similar in age; their senses of humor tend to be more sophisticated. My point is that these children are able to relax around similar children, and this doesn't appear to happen in general. My son and his friends have all experienced higher than average shares of social problems, teasing, and fighting at school. They are fine when grouped together."

—Parent, California

To subscribe to the Talented & Gifted Education bulletin board through Bitnet or Internet, type in: Mail to listserv at NDSUVM1, then type the message: Subscribe TAG-L *your name.

Book Review—

continued from page 11

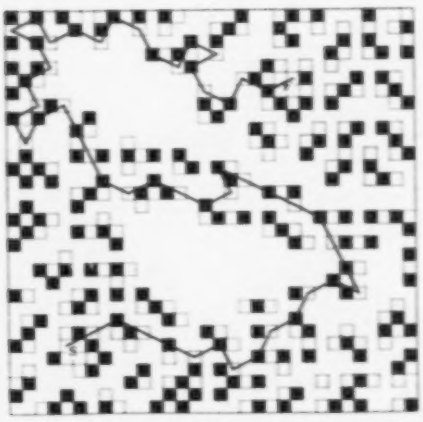
And so he performs. He works and sweats and loses sleep, suffers rejection and isolation, and finally knows the simultaneous triumph and loneliness of being the best. Inevitably comes the ultimate graduation exam: Ender's Game, the last great gamble, for the highest possible stakes.

For any fiction lover, *Ender's Game* is very nearly an entirely new genre: an adventure story with characters who really *live*, woven with moral dimensions and tensions. At the story's culmination, the reader is left exhausted, uplifted, and even a little wiser.

Card has a gift for writing superbly readable prose, a unique insight into the human soul, and a knack for setting down hard-hitting ethical questions that demand to be answered individually by each person. This combination, unequaled by nearly any contemporary writer, blends into what is sure to become a modern classic. I highly recommend *Ender's Game* to anyone who can appreciate what a gift and a burden it is to have a great talent; what it means to do a deed knowing that, while the act is unbearably wrong, *not* to do it is worse; and what it is to be fully human. Or simply to be alive. ■

Solution to Puzzle in Jan./Feb. issue of *Imagine*:

This puzzle does not have a unique solution. All solutions follow this "S"-shaped path; however, there are several ways to execute the bottom and diagonal segments of the path.



The Coach's Corner

by Chengde Feng

Here are the solutions to "The Coach's Corner" problems printed in the Jan./Feb. issue. More problems by Mr. Feng will appear in future issues of *Imagine*.

1. The following table shows the process of weighing the beads.

First Weigh		Second Weigh	
Result	Conclusion	Result	Conclusion
$W_1+B_1=W_2+G$	$B_1\neq G$	$B_1>G$	$B_1=P,\ B_2=Q,\ W_1=Q,\ W_2=P,\ G=Q$
		$B_1<G$	$B_1=Q,\ B_2=P,\ W_1=P,\ W_2=Q,\ G=P$
$W_1+B_1>W_2+G$	$W_1=P$	$B_2>G$	$B_1=Q,\ B_2=P,\ W_1=P,\ W_2=Q,\ G=Q$
	$W_2=Q$	$B_2=G$	$B_1=P,\ B_2=Q,\ W_1=P,\ W_2=Q,\ G=Q$
	$B_1\geq G$	$B_2<G$	$B_1=P,\ B_2=Q,\ W_1=P,\ W_2=Q,\ G=P$
$W_1+B_1<W_2+G$	$W_1=Q$	$B_2>G$	$B_1=Q,\ B_2=P,\ W_1=Q,\ W_2=P,\ G=Q$
	$W_2=P$	$B_2=G$	$B_1=Q,\ B_2=P,\ W_1=Q,\ W_2=P,\ G=P$
	$B_1\leq G$	$B_2<G$	$B_1=P,\ B_2=Q,\ W_1=Q,\ W_2=P,\ G=P$

2. $\Leftrightarrow 1994y-1994x=xy$

$\Leftrightarrow 1994y=x(1994+y)$

$\Leftrightarrow x=\frac{1994y}{1994+y}=\frac{1994(1994+y)-1994^2}{1994+y}=1994-\frac{1994^2}{1994+y}=1994-\frac{1994}{1+\frac{y}{1994}}$

$(0<x<1994)\Rightarrow 1+\frac{y}{1994}=2,\ 997,\ \text{or}\ 1994$

$\Rightarrow \frac{y}{1994}=1,\ 996,\ \text{or}\ 1993$

$\Rightarrow y=1994,\ 996\times1994,\ \text{or}\ 1993\times1994$

$\Rightarrow x=997,\ 1992,\ \text{or}\ 1993$

Thus, (997, 1994), (1992, 1986024), and (1993, 3974042) are all the pairs of positive integers that satisfy the equation.

3. It is easy to find that the sum of the digits of N is a multiple of nine.

Let $N=\overline{a_{1994}a_{1993}a_{1992}\ \cdots\ a_3a_2}1\times9$

$P=\overline{a_{1994}a_{1993}a_{1992}\ \cdots\ a_3a_2}1\times\underbrace{999\ \cdots\ 99}_{1994\ \text{nines}}=\overline{a_{1994}a_{1993}a_{1992}\ \cdots\ a_3a_2}1\times(10^{1994}-1)$

$=\overline{(a_{1994}a_{1993}a_{1992}\ \cdots\ a_3a_2}\underbrace{1000\ \cdots\ 00}_{1994\ \text{zeros}}-1)-(\overline{a_{1994}a_{1993}a_{1992}\ \cdots\ a_3a_2}1-1)$

$=\overline{a_{1994}a_{1993}a_{1992}\ \cdots\ a_3a_2}\underbrace{0999\ \cdots\ 99}_{1994\ \text{nines}}-\overline{a_{1994}a_{1993}a_{1992}\ \cdots\ a_3a_2}0$

Observing the special form of the minuend in the last expression of subtraction, which avoids borrowing in subtraction, we can conclude that the sum of the digits of the product P is 9x1994, or 17946.

Mr. Feng teaches mathematics at the Oklahoma School of Science and Mathematics (OSSM). He and his wife were both highly respected mathematics teachers and coaches in Tianjin, People's Republic of China, where they directed a branch of the Johns Hopkins Study of Mathematically Precocious Youth.

Keeping Your High Standards Under Control

Who's in Charge?

Be all that you can be. An inspiring—and daunting—goal. Of course, it's thrilling and rewarding to excel at something that you enjoy and value. However, the desire to realize your potential can also become a bit intimidating. "How far can I go? How will I know when I am all that I can be—or as close as I can get for the moment?"

As a highly able student, you've probably been encouraged to excel by parents and teachers who have noticed your abilities and accomplishments. As far back as you can remember, your achievements may have surpassed those of most of your agemates. Your exceptional abilities, then, may be as basic to your sense of self as any other aspect of who you are. And since you spend most of your time developing your abilities, both in and out of school, they only become more important to you with the passing of time.

There are, however, potential dangers associated with those high personal standards and expectations. If it's not clear who's in charge—you or the expectations—you may find yourself at the mercy of free-floating high expectations, and lose sight of what you really want.

The Case for Impossibly High Standards

Ah, but man's reach should exceed his grasp,
Or what's a Heaven for?

Robert Browning

Without question, the high standards of deeply motivated men and women have benefited humanity. The world's great discoveries and accomplishments would never have seen the light of day had it not been for the vision, hard work, and high standards of scientists, artists, and other creative minds. You have probably been inspired by several such individuals and their celebrated efforts.

But while high standards are an invaluable tool in the achievement of your goals, they should always be just that—a *tool*—not the boss, not the final arbiter of your success or failure. Unfortunately, when you forget this, your inner critic can take on a life of its own. And that can be hazardous, especially if the only thing your inner critic knows how to say is "not good enough." Without appropriate supervision, your high standards can be transformed from useful tools into weapons that are turned against you. Ironically, they then compromise your ability to accomplish the very goals they are pressuring you to achieve.

Avoid this problem by keeping these two important questions as your touchstones: "What underlying purpose do I want my high standards to help me accomplish?" and "Are my high standards, in fact, helping me accomplish this purpose?"

Standards, Goals, and Purpose

When standards rage out of control, it is usually because they have broken loose from the mooring of your underlying purpose. The quest for a deeply-held sense of purpose is long and involved; you'll probably spend many years fully developing yours. At this point, you may have only a general sense of what you'd like to accomplish and the values you want your life to reflect. But just being aware that you have an important, underlying purpose can keep you from being overwhelmed by your immediate tasks and goals.

The second question—are your high standards helping or hurting you?—is critical to both your achievements and your well-being. "How are my standards affecting me? Are they helping me accomplish my goals? Or are they actually making it more difficult for me to achieve my goals?" Monitoring the effectiveness of your standards is one of the best ways to keep them under control.

Your deepest commitment should be to your broad purpose, not to particular goals. For example, "I want to help sick people," not "I want to go to Harvard Medical School." For most people, goals alone—even successfully achieved goals—are not enough. Only a deep, personal vision of who you are and what you want your life to be about will help keep you balanced and satisfied as you make your way through life.

When Standards Run Amok

He had a dream in which he saw a scrawny, underfed little mare forced by drunken peasants to try to pull an impossibly heavy cartload. . . . In the dream he realized the senseless cruelty with which he was beating himself into doing something that was as impossible for him as it was for the mare to pull the heavy cartload.

Karen Horney

When standards break loose from purpose, they take on a life of their own, making all-or-nothing demands: if you're not *perfect*, you're a failure. Many sci-fi stories give voice to the fear that, one day, computers will fail to obey their human creators and will relentlessly and implacably pursue an agenda of their own. For students whose high standards have become compulsive, the computer-run-amok nightmare has already begun: a tyrannical program inside them has broken away from their rational control and has gone on a destructive rampage.

How do you know if a terminator is loose inside you? It's time to start worrying if you are damaging your health or if your perfectionism is compromising your ability to accomplish your goals—and if, even knowing all that, you still can't stop your self-destructive thoughts or behavior. The price of such inner turmoil is high and can include such life-threatening consequences as depression, eating disorders, drug abuse, and even suicide.

Those who suffer from compulsive perfectionism often shrug it off—"It's just the way I am"—but it's no laughing matter.

Our tendency to submit to unrealistic and self-destructive inner dictates is sometimes fed by our admiration for exceptional historic figures who made great sacrifices in order to fulfill their ideals. Our culture rightly celebrates individuals such as Mahatma Gandhi and Martin Luther King, whose dedication to their work was unswayed even by death threats. Marie Curie continued her research despite the damaging effects of radiation on her health.

It's true that exceptional people do sometimes engage in risky activities. But they do so out of a deep and highly developed vision or sense of purpose, not because of the demands of impossibly high standards.

If you suffer from a destructive inner tyrant, think about getting psychological help. And the sooner the better—this is not a condition that spontaneously improves with age.

Living With Your Goals: A Long-Term Perspective

One of the main reasons to stay on top of your goals and take control of your standards is that doing so offers you the best chance for long-term health and achievement. You may be able to get by in the short run, whipping yourself into line with unreasonable expectations; but eventually, something's gotta give. By creating sustainable goals and moderating your inner critic, you greatly improve your chances for long-term success *and* happiness.

Succeeding in the long run also requires that you break the habit of expecting always to be The Best. One day, while pursuing your

personal goals, you will encounter a community of people in which many can match you talent for talent. If you've been living under a "#1 or bust" imperative, facing your true peers can be quite traumatic.

Now that I'm a graduate student in math, I no longer stand out as a prodigy. About 20% of my class is, like me, at least two years accelerated. Several of the professors, including my advisor, received their Ph.D.s as early as 21 years old.

Meeting her true peers for the first time, this individual needed a sense of self that was grounded in her personal purpose. With that to hang on to, she could enjoy the fact that she had *arrived* and not berate herself for no longer standing out as exceptional.

In addition to working on your personal vision or sense of purpose, you can prepare yourself for the ego bruisings that lie ahead by participating in activities—clubs, competitions, summer programs—where you do meet your intellectual peers. Observe your feelings. Be aware of any anxiety or anger you feel about not being the best. Do you see yourself differently? Remember, you are the same person you were yesterday or last week; you haven't lost any of your gifts. Only your frame of reference has changed.

More positively, be aware of the joy of being among your intellectual peers—people who can challenge you and truly appreciate your personal victories. You have lost the pride that comes from being a big fish in a small pond, but overall, your gains can greatly exceed your losses.

The Less Than Exceptional Parts of You

More being than I'll ever use springs up in my heart...

Rainer Maria Rilke

What about all those parts of you that are not—and probably never will be—exceptional? It can be hard to accept that you are not equally excellent at everything. Often we feel rather ashamed of the parts of ourselves that don't measure up to the same high standards as our exceptional aspects do. We may even decide to limit our activities and pursuits to those at which we excel, renouncing the aspects of ourselves that seem mediocre.

There is so much more to each of us than we will ever be able to explore, let alone perfect. And ironically, renouncing the less-than-exceptional aspects of ourselves can, in the long run, limit our productivity and creativity. For many highly creative people, the pursuit of a favorite pastime provides a much appreciated—and much needed!—change of pace. Such a breather allows you to return to your work with renewed vigor and fresh insight. So don't abandon your just-for-fun pursuits; they can make an important contribution to your long-term health and vitality. And who knows what great insights they may inspire!

The less-than-exceptional aspects of ourselves can also be invaluable teachers: through them we learn patience, compassion, humility—hard lessons for people who like to live up to high standards. They also help us learn to laugh at ourselves—not the cruel laughter of the inner critic, but the laughter that comes from accepting our humanity.

When You Don't Achieve A Goal

The high that proved too high,
the heroic for earth too hard,
The passion that left the ground
to lose itself in the sky,
Are music sent up to God
by the lover and the bard;
Enough that he heard it once:
we shall hear it by-and-by.

Robert Browning

How do you talk to yourself when you have a setback? Do you use it as an excuse to call yourself a failure? Or do you step back, think about what happened, and decide how you want to proceed, utilizing the additional information that "failure" always bestows on us? How you talk to yourself will determine whether a setback becomes an opportunity to punish yourself or to do some serious thinking.

No great success was ever achieved without a lot of hard work—or without false starts, dead ends, setbacks, and even what seem at the time to be outright disasters. Such times are when you most need your deep personal values to hold on to, to help you retain some perspective.

A Journey of a Thousand Miles

Human beings can alter their lives by altering their attitudes of mind.

William James

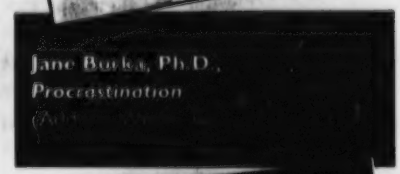
Each of us is unique—in our gifts, our abili-ties, our interests and passions, our personal-ities, and in the insights that our family and cultural backgrounds give us. Through the trial and error of daily life, we each struggle to define our personal goals. And through more trial and error, we each try to live lives that manifest our values and vision.

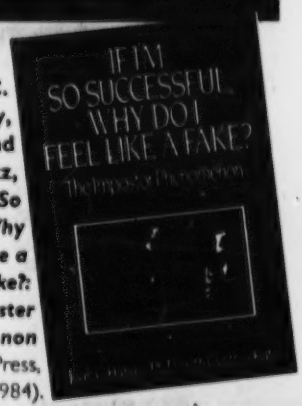
Each step we take can change us. Each decision, each consequence teaches us something about ourselves and gives us the opportunity to see things in a new way. As we move through life, we are given t he chance again and again to see how well we have matched our means and goals to our interests, abilities, and purpose.

High standards can be an invaluable source of motivation and inspiration as you strive to lead a life that satisfies your deepest purpose. Or they can form a mindless and relentless inner critic that drains you of energy that you could put to much better use. There is no shortage of negative influences in our world. With effort, you can make your high standards your ally, not your tormentor.■

For Further Reading:

Gina Graham Scott, Ph.D., *The Empowered Mind: How to Harness the Creative Forces Within You* (Prentice Hall, 1944).



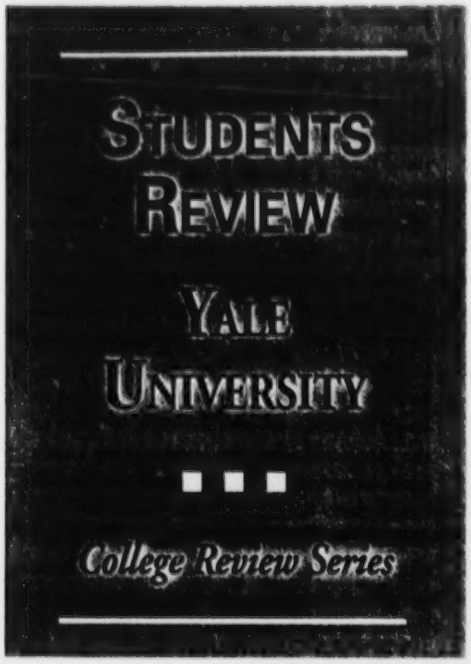


Joan C. Harvey, Ph.D. and Cynthia Katz, *If I'm So Successful, Why Do I Feel Like a Fake?: The Imposter Phenomenon* (St. Martin's Press, 1984).

BEST COPY AVAILABLE

This on-going series is intended to aid prospective college students in their search by offering insiders' views of selected colleges and universities, as expressed by current undergraduates or recent graduates who have exceptionally high academic ability. These students share a general bias in judging undergraduate education: they all have high expectations for a college or university's academic standards, its institutional and instructional flexibility, and its respect for nurturance of emerging talent. In this issue, we focus on Yale University.

Note that the number of student reviewers is small. Consider their personal perspectives as only one component while you gather factual information and impressions from such other sources as college catalogs, site visits, talks with officials and students on campus, and the advice of your guidance counselor and teachers.



Yale University

Our reviewers include eleven students, who major(ed) in American studies (1), archaeological studies (1), computer science (1), East Asian studies (1), English (1), environmental studies (1), ethnic studies (1), history (1), humanities (1), math (2), molecular biophysics & biochemistry (1), music (1), and philosophy (1). (The number of majors exceeds eleven because several students have double majors.) Students' comments appear within quotation marks.

Quality of Academic Instruction for Undergraduates

The word that was repeatedly used in describing the quality of instruction and the academic resources was "excellent." The faculty generally received high marks for accessibility. Rather than a core curriculum, Yale has a system of distribution requirements. This system, and the range of courses available to fill the requirements, received unanimous praise.

"Yale focuses a lot of attention on its undergrads, as opposed to some other major research universities. Professors teach almost all the classes (except things like calculus) and tend to be very accessible—in addition to regular office hours, many profs invite students over to their houses or eat with students in the dining halls."

"I have never found a professor who refuses to meet with students. Some of the more famous professors may seem intimidating, but are accessible if you can overcome feeling intimidated."

*"The best. The music department has quite a few genius-caliber musicians. My experiences are admittedly different from most, but I count two professors as close **personal** friends, and two others as **peer** acquaintances. That's the kind of faculty-student interaction Yale affords."*

"I was in a special humanities program for freshmen called Directed Studies—an extremely demanding program (some called it 'Directed Suicide') that consists of three related seminars (literature, philosophy, and history & politics) taught mostly by full professors. Directed Studies allowed me to have access as a freshman to famous professors—people who helped guide my course selection later on."

"There is no set 'core' curriculum, thank goodness. Instead there are distribution requirements; these do not track students into special courses for the uninterested, as 'cores' tend to do. There are many small seminars (students can find people to teach special courses above and beyond the regular 2000+ offerings)."

"The course offerings are staggering. There were always many more courses available that interested me than I could take in a semester. And academic resources are incredible; I was amazed at the stuff we had in our libraries."

"I got an outstanding education. But not everyone does. Attending a research university, students have to make a choice between hiding out in the back of large lecture courses and learning nothing or working hard in a small seminar and learning a great deal. Both options are very possible at Yale."

*"There's a lot of talk about grade inflation, and I think it does exist. But (and I don't mean to boast) I **expected** to get As in most of my courses. I saw far more people receive poor grades as a result of simply not doing work than as a result of trying and still doing poorly."*

Social Life

Yale received high praise from all reviewers for the social life it affords its students. The Residential College organization of the school provides a relatively secure, small-group environment and fosters a sense of community. The extensive array of extracurricular and volunteer activities was also highlighted as an important aspect of what Yale has to offer.

"Social life for undergrads is excellent. For a school of its size, the campus is relatively small. There are few social distractions in New Haven outside Yale, so the energy of the students tends to be focused on campus, with the result that there is always a lot going on."

"The social life is quite diverse, but it all derives from the university. New Haven offers little except a few bars and movie theaters. College-sponsored theater groups, musical performances, movie clubs, other social events, and extensive extracurriculars are the social life of Yale."

"Yale has so much going on within it that you don't need an external social environment."

"The Residential College system (modeled on Oxford's) is extremely important to the social life. By breaking down the 5,000 members of the student body into 400-person groups who live together for four years, it creates a smaller school atmosphere within the larger university. It's excellent socially for students who get along best in a small group environment. Because Residential Colleges are basically assigned randomly before freshman year, each college tends to be a representative mix of the student body."

"The Residential College system provides a community-within-the-community that I found reassuring; however, it can also make getting to know people outside one's college, if not more difficult, at least less likely."

What Do You Like Best About Yale?

"The friends I made and the innumerable stimulating conversations I had with people in the dining hall, courtyard, or even crew lagoon. I liked the sense of community and camaraderie that allowed me to learn more about myself and the world around me in a (mostly) painless way."

"The education I received. I'm applying to graduate school right now, and I feel as well prepared as any student in the country."

"Involvement in extracurriculars. I also loved my classes and my major. Best, though, are the people and my interactions with them."

"The academic freedom afforded by a system of distributional requirements rather than a set of core courses."

"In an odd way, the daily reality of life in New Haven. As a college student, it is sometimes hard to remember that a senior thesis is not the biggest burden a person can face; at Yale, it's not easy to forget. Walking out of a seminar on Chaucer and being asked repeatedly for spare change is not a pleasant experience, but it is a salutary one. It forces you to be aware of your privileged status within the world. It also prompts some people to become involved—a third of all Yale students perform community service."

What Do You Like Least About Yale?

Targets of criticism were New Haven and Yale's privileged elite tradition.

*"Safety is an issue in New Haven. With adequate precautions, it's not a **big** issue, but always having to be careful and needing to avoid certain places at night was definitely a minus."*

*"New Haven stinks. It has **all** the disadvantages of a big city (crime, poverty, pollution, traffic) without **any** of the advantages."*

"Yale's aura of privilege. It is fairly diverse, and it makes an effort to be so. But the students, for all their ethnic diversity, are—or seem to be—quite affluent. The true barrier is class. There was a woman in my Shakespeare class who dressed in 'heavy metal' T-shirts and wore too much eyeliner. It was amazing to watch how quickly my liberal classmates recoiled."

"The self-satisfaction of most Yale students (although I probably share in it). When I was applying to college, I read in one guidebook that 'everyone at Yale secretly thinks that everyone else in the world (with the possible exception of Harvard students) really wanted to go to Yale and couldn't get in.' Never did a guidebook print truer words."

Yale University

New Haven, CT 06520
(203) 432-1900

- 4-year private coed university
- Urban campus in a small city.
- Semester system.
- Full-time undergraduate enrollment 1993-94: 2,817 men; 2,217 women.
- Special features: Yale Repertory Theater, Beinecke Rare Book Library, art galleries, museums, observatory, golf course.

"I think it's harder to be a person of color at Yale than at a place like Berkeley, mostly because of the strong sense of New England white male privileged tradition that pervades many of the rituals."

What Would It Take to Be Admitted to Yale?

"There's no one type of person who would fit in best at Yale. Qualities that are important, though, are open-mindedness, the ability to enjoy challenges, an inquisitive spirit, and a desire to work hard. There are many kinds of people at Yale and many niches to fit into."

*"Motivation is the key. I found little overt pressure at Yale in the sense of cut-throat academic competition. But I did find a subtle, pervasive pressure: one feels a need to be exceptional at **something**. It may be academics, it may be extracurriculars, but it has to be something. With so many brilliant, talented, or just plain privileged people around, there are inevitably times when one feels inadequate, and this may be why some people feel oppressed there. But a person with a strong sense of self and an ability to motivate him/herself can thrive in Yale's environment."*

"Someone who is intensely involved in one thing. Not all students at Yale are dedicated to their studies, but nearly everyone is dedicated to something. No extracurricular commitment is ever casual. This can be a problem, because people aren't really free to dabble in something new. But it also creates the vibrant and accomplished cultural life that distinguishes Yale."

If You Had It to Do Over Again, Would You Go to Yale?

All reviewers said yes.

"Definitely. The combination of academics, extracurriculars, and intellectual and social life was, for me, unbeatable. True, many things would be similar at the other schools I looked at when I was a senior in high school; but looking back, I think the little differences really add up—Yale was just a better place for me to be."

"Absolutely. Although I sometimes do not approve of Yale, the institution, I have had invaluable life-changing experiences, pushed my mind, made close friends, and had a lot of heartache and fun."

"Yes. As difficult as it was to adjust to the WASP male tradition, I know I am stronger for it, as well as better prepared to deal with such situations (emotionally and intellectually) in other parts of my life. Besides, the education I got was stellar."

"Absolutely. I would give so much for just one more year there."

As you try to find the college or university best suited to you, the views of Yale presented above may be helpful. Keep in mind that these students might have had similar positive or negative experiences had they attended a different university. At any college, it is important for the individual student to seek out challenging academic experiences and the best professors, and to create a social life that best fits his or her personal style. ■

Note: The students quoted in the College Review Series are expressing their own views, which are not necessarily those of JHU or CTY.

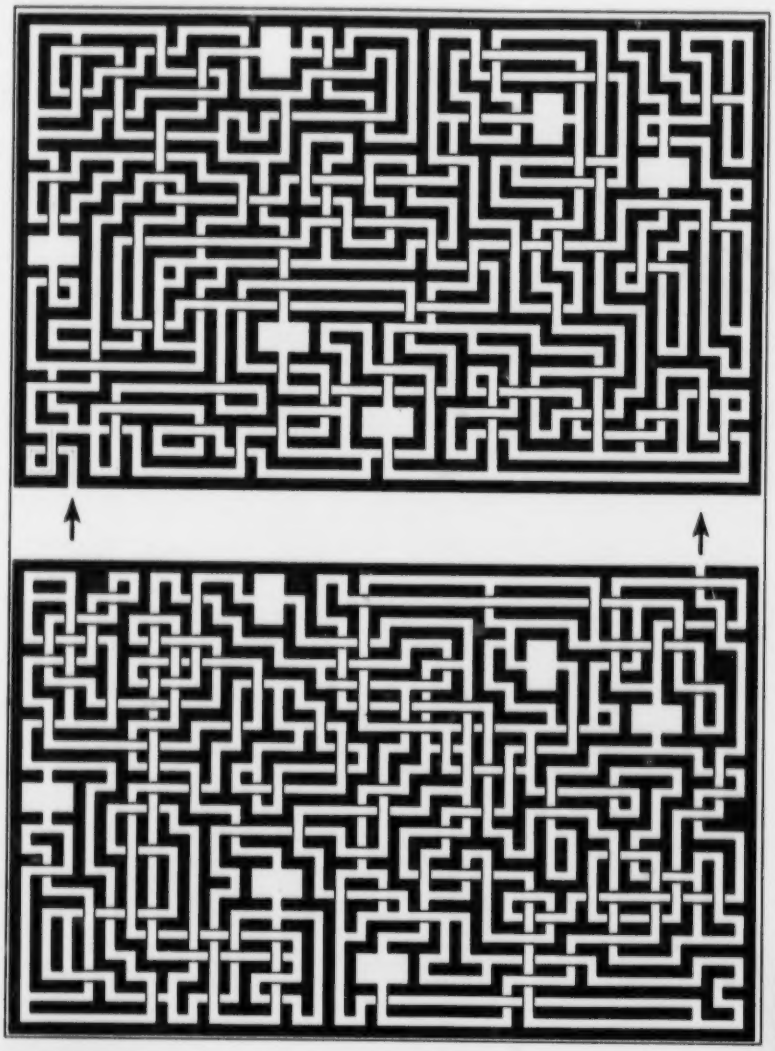
BEST COPY AVAILABLE

ImaGiNe...

Submit your creative work—brain teasers, short stories/essays/book reviews. We look forward to hearing from you.
Please write to *Imagine* • SET at CTY • The Johns Hopkins University • Baltimore, MD 21218

Another Puzzle: *by Tim Boester*

The objective is to enter the top maze (arrow) and leave the bottom maze (arrow). Every time you come to one of the little "rooms" (white rectangles), jump to the corresponding room in the other maze. As you move through the mazes, obey the underpasses and overpasses (as shown in the initial dotted line). You are not required to pass through all the rooms.



Fascinated by mazes and puzzles, **Tim Boester** is also intrigued by roller coaster design. Tim plans to study physics and math when he enters college next fall.

Book Review

by Stephanie Davis

For those who have never read any of Orson Scott Card's work, *Ender's Game* will be no less than a revelation. So many times in the course of my reading, I found myself smacking my forehead and saying, "So that's why people do that, or "I never thought of it that way," or "I've been there."

Superficially a typical science fiction novel, *Ender's Game* is set several hundred years in the future after the often-predicted invention of light-speed travel and colonization of other planets. Seventy years before the story opens, violent contact with an alien race had led to a forced alliance between the nations of Earth, in an effort to prepare for the next and more serious confrontation.

Here begin the unique twists and novel concepts for which Card is so renowned. Earth's survival and semi-triumph in the last battle was made possible only by the brilliant strategies of a little-known human admiral. Unprepared and driven by desperation, he had led his forces to victory at a time when the *buggers'* ships so far outnumbered and outclassed the human fleet that Earth's destruction seemed imminent. Now, as the next and final war draws near, humanity is in need of a still greater military mind—one bred and trained for a vital command in the ultimate showdown.

Enter Ender, a precocious child with a less-than-childlike experience of the world. Since birth, he has lived with the knowledge that his very existence was authorized by Earth Government in hopes that his was the right gene combination to produce a mental superman, a hero for the human race. At six, cognizant of what lies ahead and prepared to do his duty, Ender is deported to Battle School and begins the grooming process to become the savior of mankind.

Stephanie Davis is a 10th grader at Thomas Jefferson High School for Science and Technology in Alexandria, Virginia. She is a senior editor for the literary magazine *Fragments* and enjoys writing, reading, and participating in forensic (dramatic excerpts) competition. Stephanie's original works have received national recognition from the Foundation for a Creative America and the American Academy of Achievement.